

REMARKS

Claims 1-10 are pending in the current application. In an office action dated May 5, 2007, the Examiner objected to claims 3-5, rejected claims 8-9 under 35 U.S.C. § 112, second paragraph, rejected claim 2 under 35 U.S.C. § 101, rejected claim 1 on the ground of non-statutory obviousness-type double patenting, and rejected claims 1-10 under 35 U.S.C. § 103(a) as being unpatentable over Clayton et al., U.S. Patent No. 6,785,442 B1 ("Clayton") in view of Janoska et al., U.S. Patent No. 6,539,024 B1 ("Janoska"). Applicants' representative has amended claims 3, 4, 6, 8, and 9 to address the Examiner's objections to claims 3-5 and 35 U.S.C. § 112, second paragraph, rejections of claims 8-9. Applicants' representative includes a terminal disclaimer to address the Examiner's non-statutory obviousness-type double patenting rejection of claim 1. Applicants' representative respectfully traverses the rejection of claim 2 under 35 U.S.C. § 101 and rejections of claims 1-10 under 35 U.S.C. § 103(a).

With regard to the rejection of claim 2 under 35 U.S.C. § 101, the Examiner's statement that claim 2 is identical to claim 1 of the parent patent, U.S. Patent No. 6,697,330 B1, is incorrect. Because of the indentation of the originally submitted claim was not replicated in the parent application, claim 1 of the parent application may not be as clearly claimed, due to the conjunction "and" at the end of line 58 of column 16 of the parent application, as claims 1 and 2 of the current application, in which this conjunction is omitted. Furthermore, the last 5 words of claim 1 of the parent application read: "referenced by queue message descriptor," while the corresponding portion of claim 2 of the current application reads: "referenced by the queued message descriptor." Thus, claim 2 of the current application is not identical to claim 1 of the parent application.

The rejections of claims 1-10 under 35 U.S.C. § 103(a) depend primarily on Clayton. Clayton does not disclose, teach, mention, or suggest the claim limitations that the Examiner alleges Clayton disclosing. For example, the Examiner refers to box 33 of Figure 2 of Clayton as disclosing a method for initiating flow control. Box 33 is described by Clayton, on line 45 of column 7, as a flow-control circuit. A rectangle labeled "flow control" in a block diagram does not teach, mention, or suggest a method of

any kind. Moreover, Figure 2 does not depict a network multiplexer, but instead depicts a computer system connected to a network (*see* lines 49-50 of column 6 of Clayton), such as computer system 12(1) in Figure 1 of Clayton, and has nothing to do with a network multiplexer.

As a second example, the Examiner refers to boxes 84 and 83 in Figure 5 of Clayton as a network multiplexer. A network multiplexer is defined, in the first paragraph of the current application, as follows:

Bridges, switches, and routers are types of network multiplexers that receive communications packets, also called messages, from network media, such as ethernets, and forward the received communications packets to one or more network media. Network multiplexers serve to link physically separate network media into a single network. A network multiplexer contains a number of ports through which separate physical network media are coupled to the network multiplexer. Each port is associated with a receive queue that contains message descriptors pointing to memory locations in which received communications packets are stored, and are associated with transmit queues containing message descriptors that point to communications packets stored in memory for transmission by the port. A network multiplexer forwards received communications packets by moving message descriptors from receive queues to transmit queues.

By contrast, boxes 84 and 83 in Figure 5 of Clayton are simple electronic signal multiplexers, as discussed on lines 42 through 54 of column 16 of Clayton. These are not network multiplexers, and are not even remotely related to network multiplexers. Moreover, Clayton does not describe any kind of flow control method, or any other kind of method, carried out within, or related to, electronic multiplexers 84 and 83. Anyone cursorily familiar with electronics and computer systems well understands the difference between electronic signal multiplexers and network multiplexers, as defined in the current application. Finally, Figure 5 depicts a component of a computer system, and has nothing whatsoever to do with network multiplexers, as explicitly stated on lines 8-10 of column 3 of Clayton. *As should be apparent from the above-quoted passage of the current application, network multiplexers are bridges, switches, routers, and other such devices that bridge two or more networks, rather than computer systems that are connected to terminal points of a network, such as the computer systems shown in Figure 1 of Clayton.*

As a third example, the Examiner refers to column 13, lines 53-59 of Clayton as disclosing "that forward a message descriptor referencing a communications packet." The cited lines of Clayton discuss pointers to control blocks for virtual circuits that contain commands and control information, including pointers to system memory buffers. However, the control block describes a virtual circuit, and not a particular communications packet, and is not a message descriptor. Moreover, there is absolutely nothing in the cited passage regarding forwarding of a message descriptor to a transmit queue. Moreover, Figure 5 of Clayton depicts a receive scheduler of a computer system (see lines 7-8 of column 3 of Clayton), such as computer system 12(1) in Figure 1 of Clayton, and has nothing to do with a network multiplexer.

As a fourth example, the Examiner refers to box 50 of Figure 2 as teaching a transmit queue of a network multiplexer. Figure 2 does not depict a network multiplexer of any kind, but instead depicts a computer system connected to a network (see lines 49-50 of column 6 of Clayton), such as computer system 12(1) in Figure 1 of Clayton.

As a fifth example, the Examiner refers to lines 52-55 of column 9 of Clayton as teaching "each transmit queue associated with a transmitting port which transmits communications packets queued to the transmit queue." The transmit queue is contained in a network multiplexer, according to claim 1, while lines 52-55 of column 9 of Clayton instead refer to components of a computer system. As discussed above, network multiplexers connect different networks to one another, in contrast to a computer system connected to a terminal point of a network.

As a sixth example, the Examiner refers to lines 53-59 and 63-69 of column 9 of Clayton as teaching "providing each transmitting port in the network multiplexer with a high threshold and a low threshold." The cited lines of Clayton have nothing whatsoever to do with a network multiplexer, but instead describe components of a computer system connected to a network. Please note that the first element of claim 1 explicitly states "in the network multiplexer." The only diagram related to a network multiplexer in Clayton appears to be Figure 3, which shows a block diagram of a switching node. *Computers attached to a single network, such as those shown in Figure*

1 of Clayton, and shown at block diagram level in Figure 2 of Clayton, are not network multiplexers. Furthermore, lines 53-59 of column 11 do not teach, mention, or suggest any kind of threshold, low or high.

As a seventh example, the Examiner refers to lines 9-14 of column 10 as teaching "when a message descriptor is queued to a transmit queue associated with a transmitting port." The cited lines of Clayton refer to a condition in which there are no buffered cells in a transmit buffer. This is a condition exactly opposite to that of a queued cell, or to any kind of transmit queue to which queued entities are queued. Furthermore, again, this passage refers to a computer system, rather than a network multiplexer.

As an eighth example, the Examiner refers to lines 63-69 of column 11 of Clayton as teaching "when the transmit queue currently contains a number of message descriptors equal to or greater than the high threshold of the associated transmitting port, sending a flow control request to the receiving port that received the communications packet referenced by the queued message descriptor." The cited passage of Clayton discusses operation of components of a computer system, rather than a network multiplexer. Furthermore, the final element of claim 1 discusses a transmit queue, transmit port, and receiving port all within a single network multiplexer. By contrast, Clayton discusses sending flow control messages from an end-point computer system to external devices via a communications link, or virtual circuit. The cited portion of Clayton has nothing whatsoever to do with the final element of claim 1.

The cited portions of Clayton appear to have been cited based on a text search that identified various isolated claim terms used in Clayton. However, claim interpretation is not based on a piecemeal finding of terms, but rather on finding a teaching or disclosure of claim elements. Claim elements employ terms used within the context of a claim, the claim residing within the context of a specification. Claim terms are interpreted based on those contexts, and on how the terms and phrases would be interpreted by one skilled in the art. The rejection of claims 1-10 fall far short of the requirements for a *prima facie* obviousness rejection, as discussed in M.P.E.P. §2142. Clayton does not teach, mention, or suggest the claim elements or terms for which it is

cited. None of claims that depend from claim 1, including claims 2-5, are obvious in view of Clayton and Janoska, since these claims include the limitations of claim 1. Claims 6-10 are directed to a network multiplexer, for which the Examiner has primarily cited passages of Clayton related to computer systems connected to terminal points of a network, unrelated to network multiplexers. Applicants' representative urges the Examiner to re-read both the current application and Clayton in view of the above comments. The phrase "network multiplexer" is quite well defined in the current application. Clayton's disclosure related to network multiplexers appears to be confined only to the discussion of Figure 3, while the Examiner appears to exclusively cite portions of Clayton unrelated to network multiplexers.

In Applicant's representative's opinion, all of the claims remaining in the current application are clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
Bruce W. Melvin et al.
Olympic Patent Works PLLC


Robert W. Bergstrom
Registration No. 39,906

Enclosures:

Postcards (2)
Transmittal in duplicate
Terminal Disclaimer in duplicate

Olympic Patent Works PLLC
P.O. Box 4277
Seattle, WA 98194-0277
206.621.1933 telephone
206.621.5302 fax